

#CHAIR2020

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Master Class for Neuroscience Professional Development

February 27-29, 2020 | The LINQ | Las Vegas, Nevada

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Progress in Suicide Prevention

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Disclosures



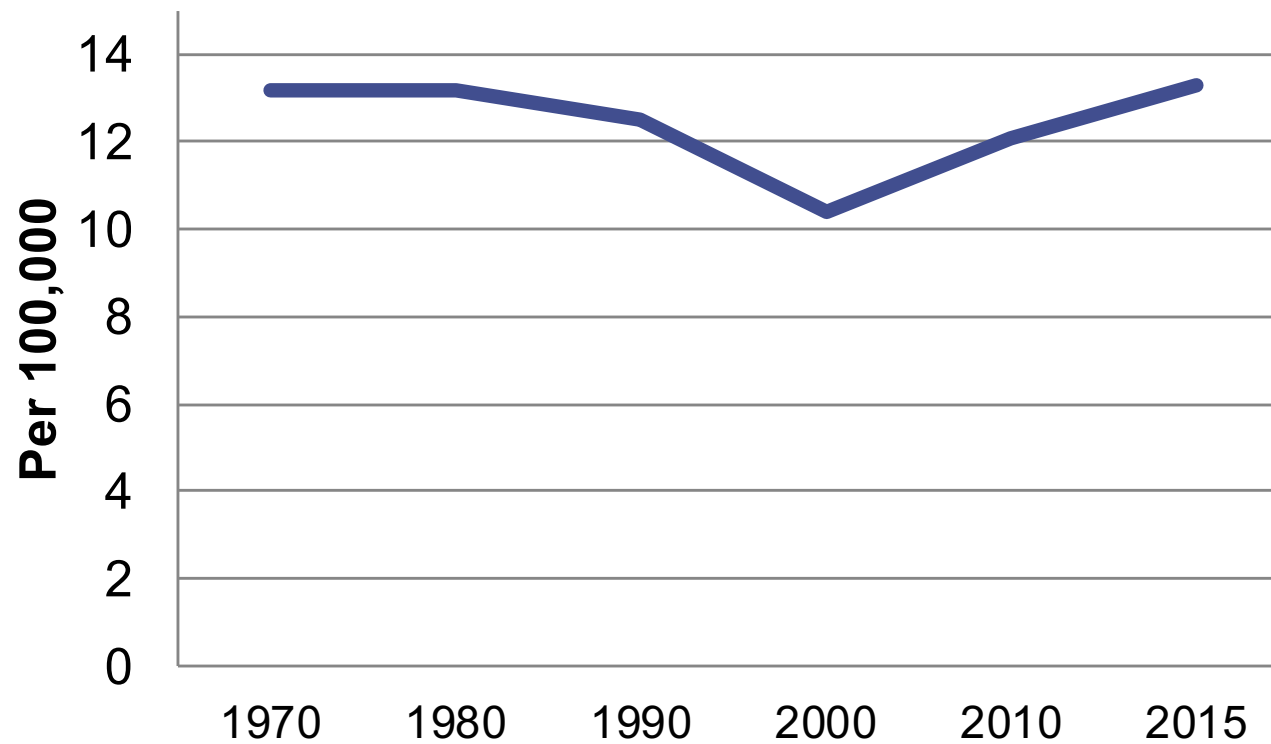
- **Research/Grants:** National Institutes of Health (NIH)
- **Consultant:** ACADIA Pharmaceuticals Inc.; Bracket (Clintara); EMA Wellness; Gerson Lehrman Group, Inc. (GLG); Intra-Cellular Therapies, Inc.; Janssen Research & Development LLC; Magstim, Inc.; Navitor Pharmaceuticals, Inc.; Sunovion Pharmaceuticals Inc.; Taisho Pharmaceutical Inc.; Takeda Pharmaceuticals North America, Inc.; TC MSO, Inc.; Xhale, Inc.
- **Stockholder:** AbbVie Inc.; Antares Pharma; BI Gen Holdings, Inc.; Celgene Corporation; Corcept Therapeutics; EMA Wellness; OPKO Health Inc.; Seattle Genetics, Inc.; TC MSO, Inc.; Trends in Pharma Development, LLC; Xhale, Inc.
- **Advisory Board:** American Foundation for Suicide Prevention (AFSP); Anxiety Disorders Association of America (ADAA); Bracket (Clintara); Brain & Behavior Research Foundation (BBRF); Laureate Institute for Brain Research, Inc.; Skyland Trail; Xhale, Inc.
- **Board of Directors:** American Foundation for Suicide Prevention (AFSP); Anxiety Disorders Association of America (ADAA); GratitudeAmerica, Inc.; Xhale, Inc.
- **Income Sources or Equity of \$10,000 or More:** American Psychiatric Publishing; Bracket (Clintara); CME Outfitters, LLC; EMA Wellness; Intra-Cellular Therapies, Inc.; Magstim, Inc.; Xhale, Inc.
- **Patents:** Method and devices for transdermal delivery of lithium (US 6,375,990B1); Method of assessing antidepressant drug therapy via transport inhibition of monoamine neurotransmitters by ex vivo assay (US 7,148,027B2); Compounds, Compositions, Methods of Synthesis, and Methods of Treatment (CRF Receptor Binding Ligand) (US 8,511,996B2)

Learning Objective 1

Evaluate latest evidence regarding risk and protective factors for suicide



U.S. Suicide Facts: 1970-2015

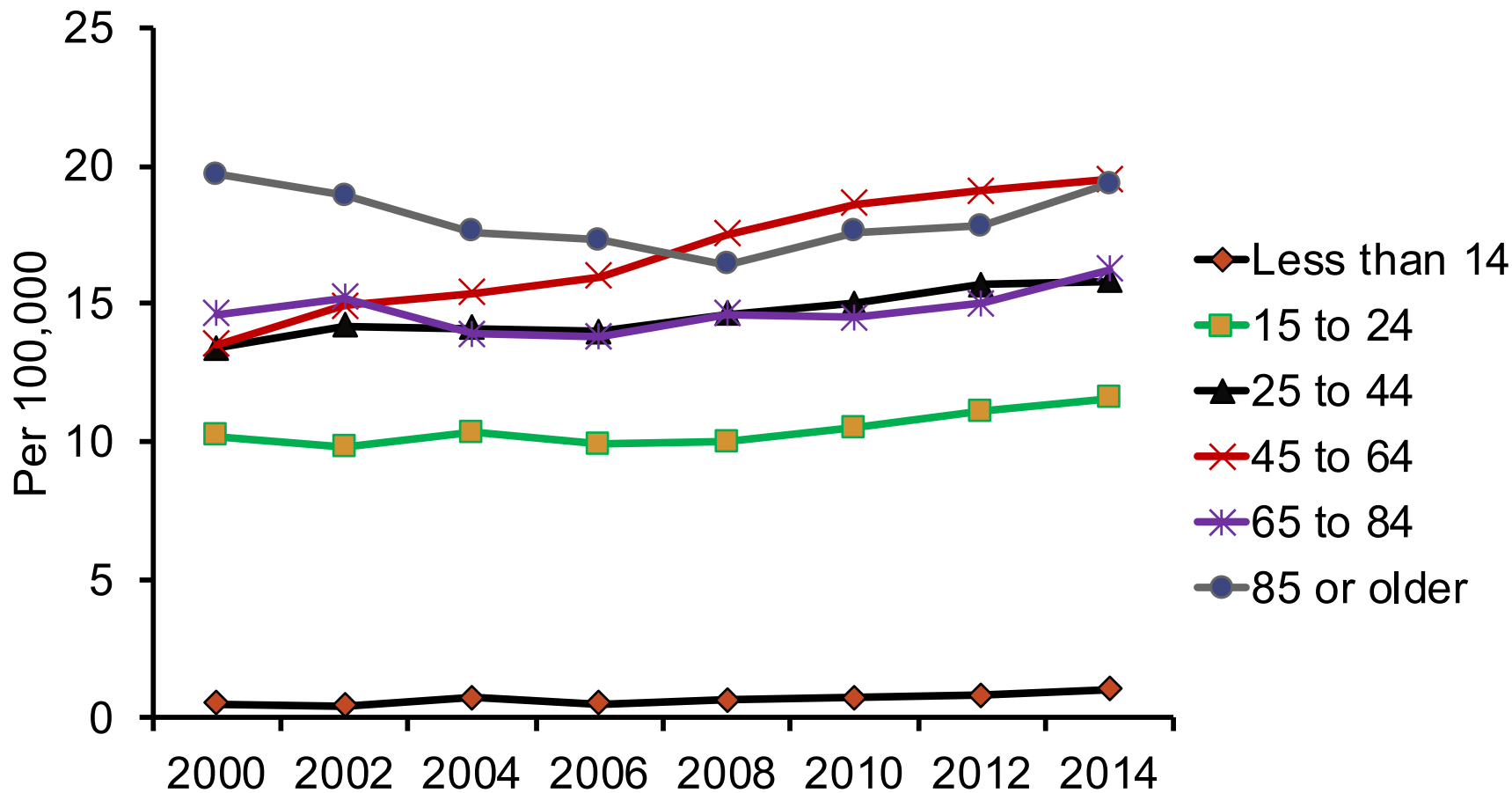
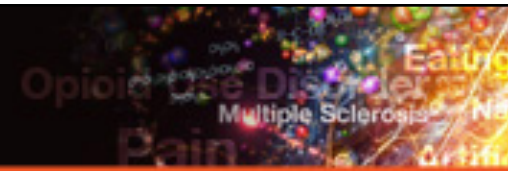


U.S. Suicide Facts: 2017 CDC



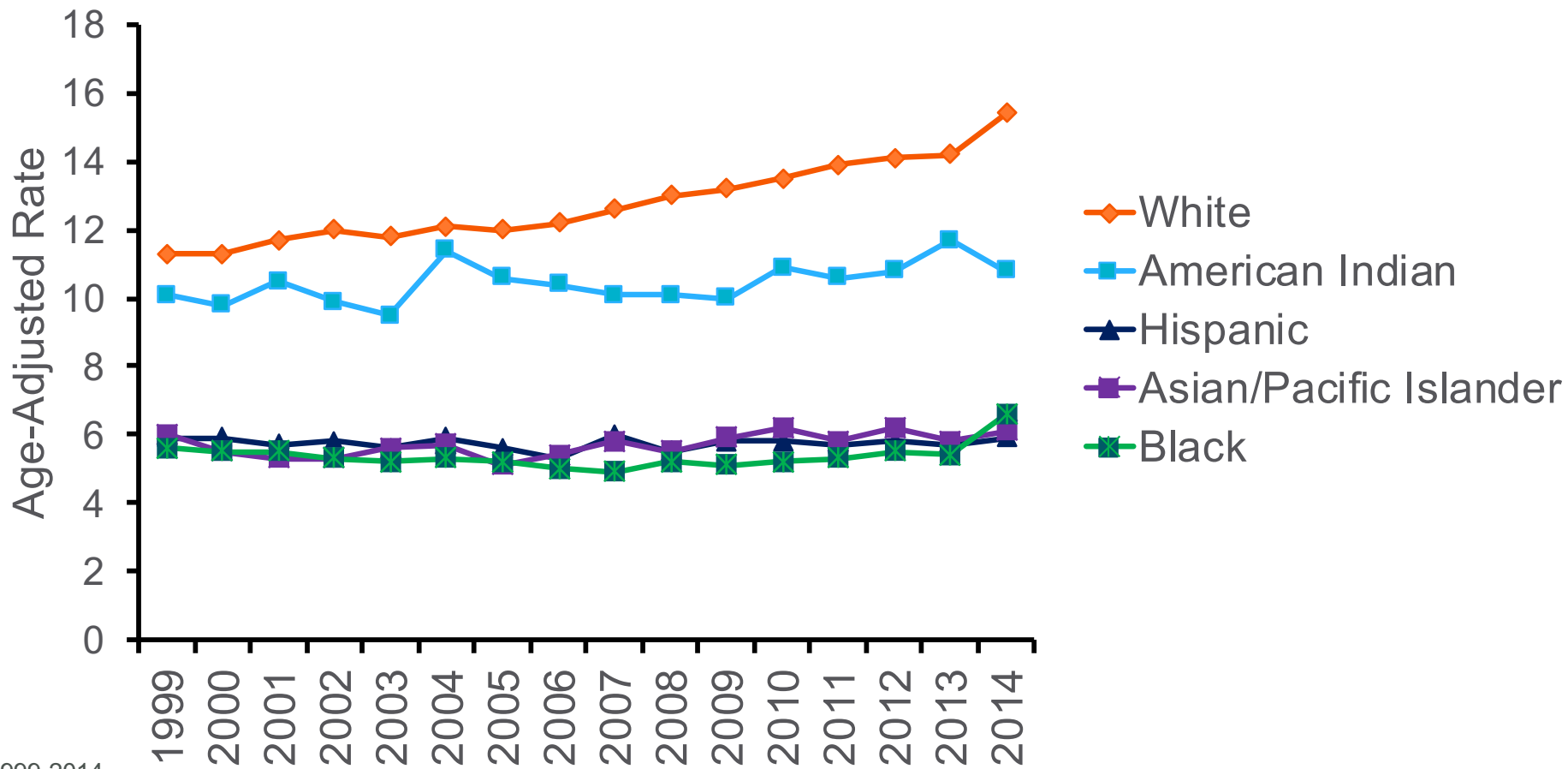
- 47,173 suicides
- 129/day, every 12 min in U.S.
- 10th leading cause of death in U.S.
 - 2nd for 15-34 yr, 4th for adults 24-64 yr
- Regional & demographic differences
- Veterans rate 20% higher than age-matched
- For every death ~25 suicide attempts
 - *1.4M adults attempt annually*
- 60% of Americans experience loss to suicide
- Suicide rate greatly exceeds the homicide rate
- > 500,000 visits to emergency rooms due to self-harm

U.S. Suicide Rates by Age



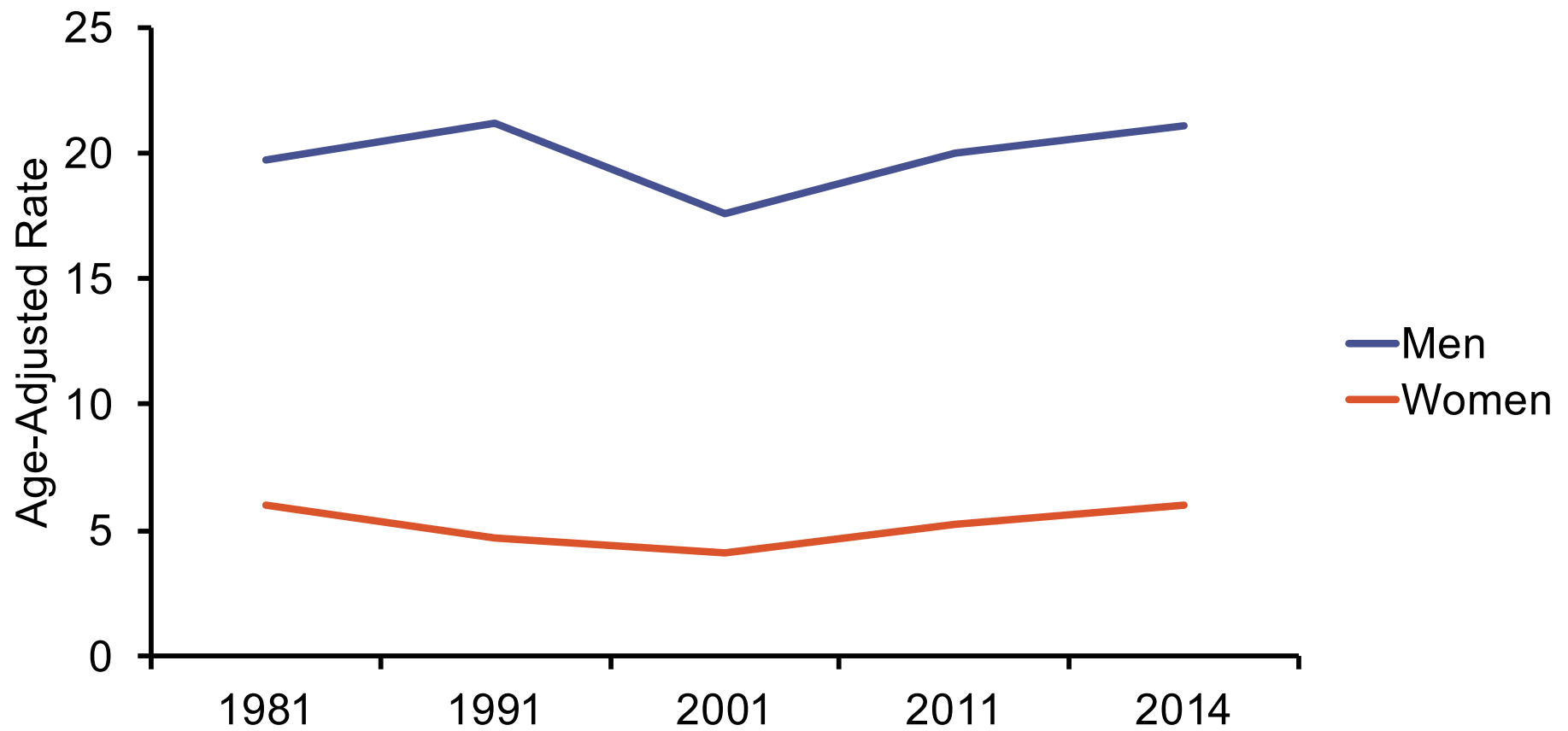
CDC

U.S. Suicide Rates by Race/Ethnicity



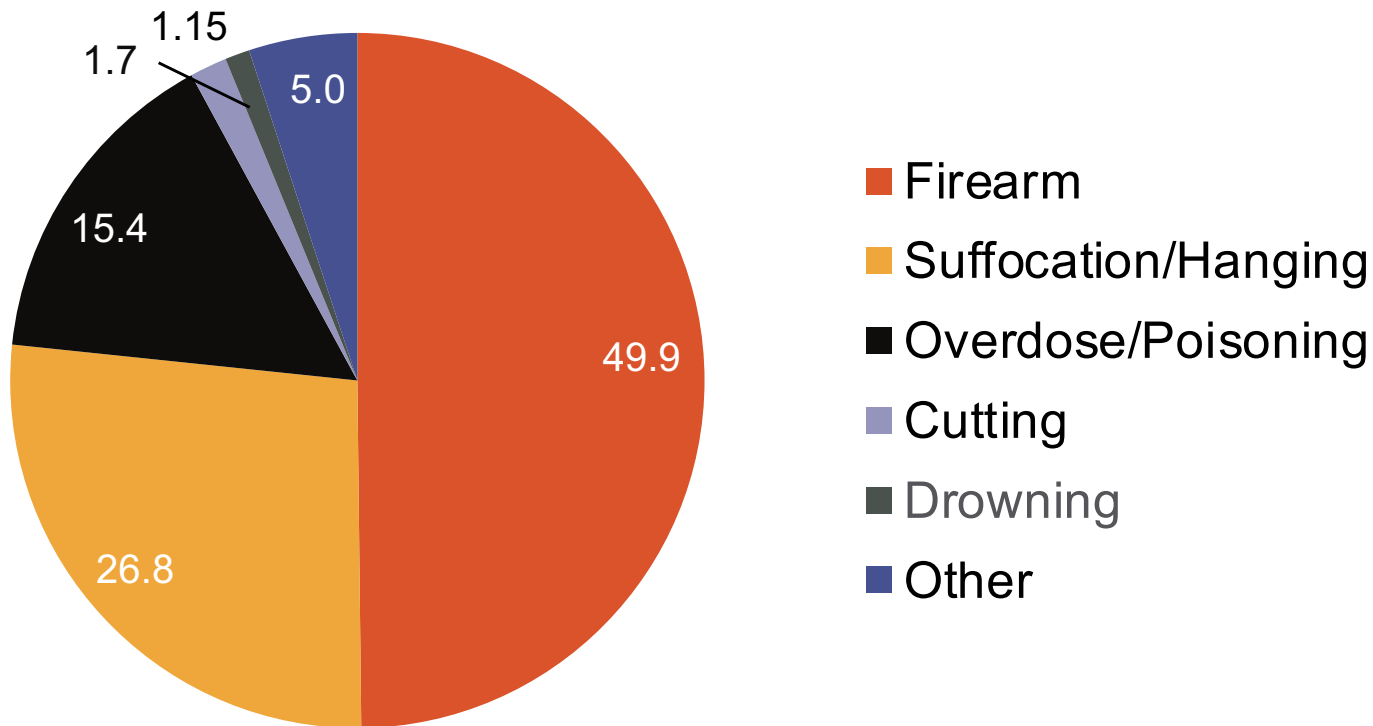
CDC 1999-2014.

U.S. Suicide Rates by Sex: 1981-2014



CDC 2015.

Methods of Suicide Death in U.S.



CDC 2015.

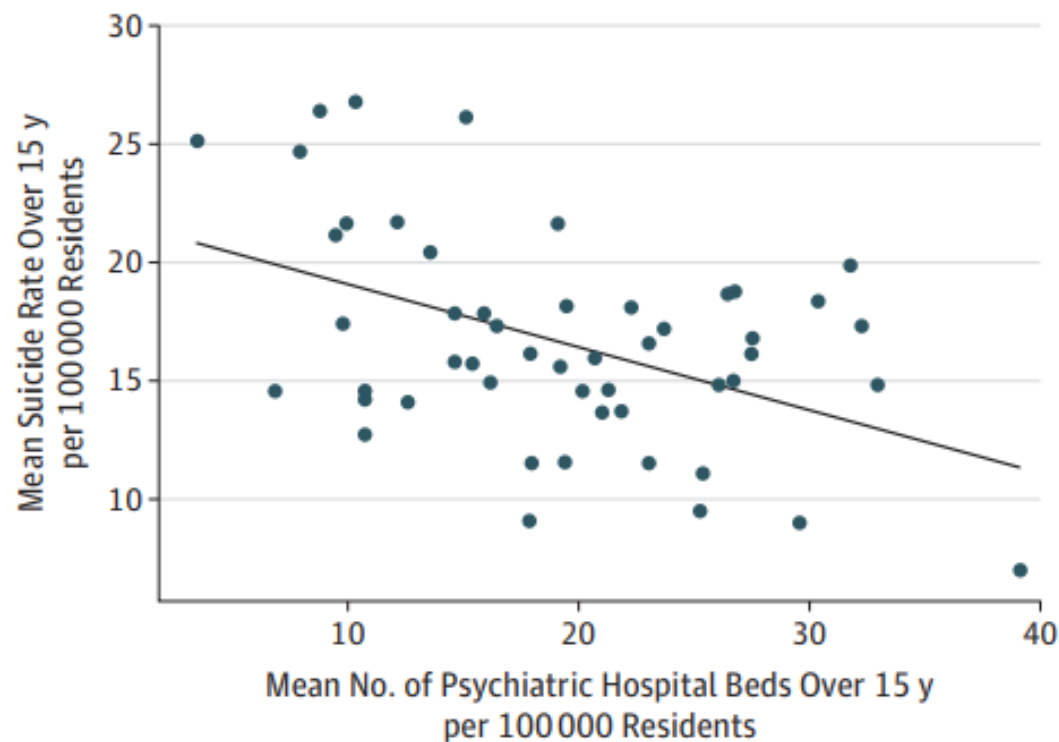


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Suicide Rates and the Declining Psychiatric Hospital Bed Capacity in the U.S.



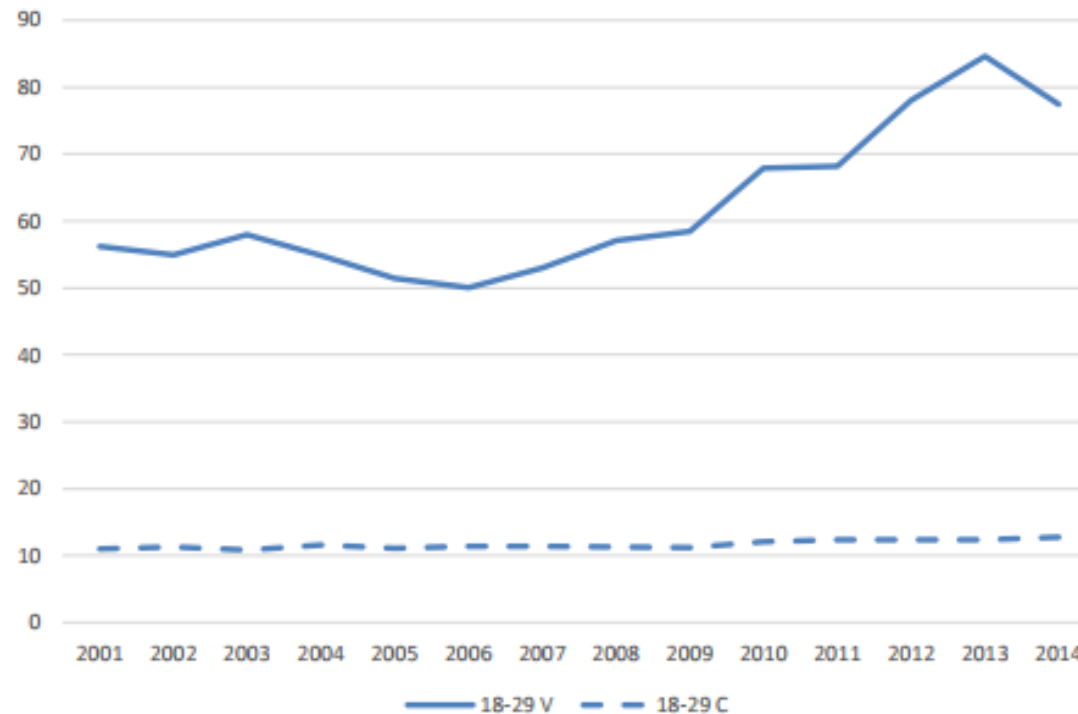
B Between-state association



Gibbons RD, et al. *JAMA Psychiatry*. 2017;74:849-850.

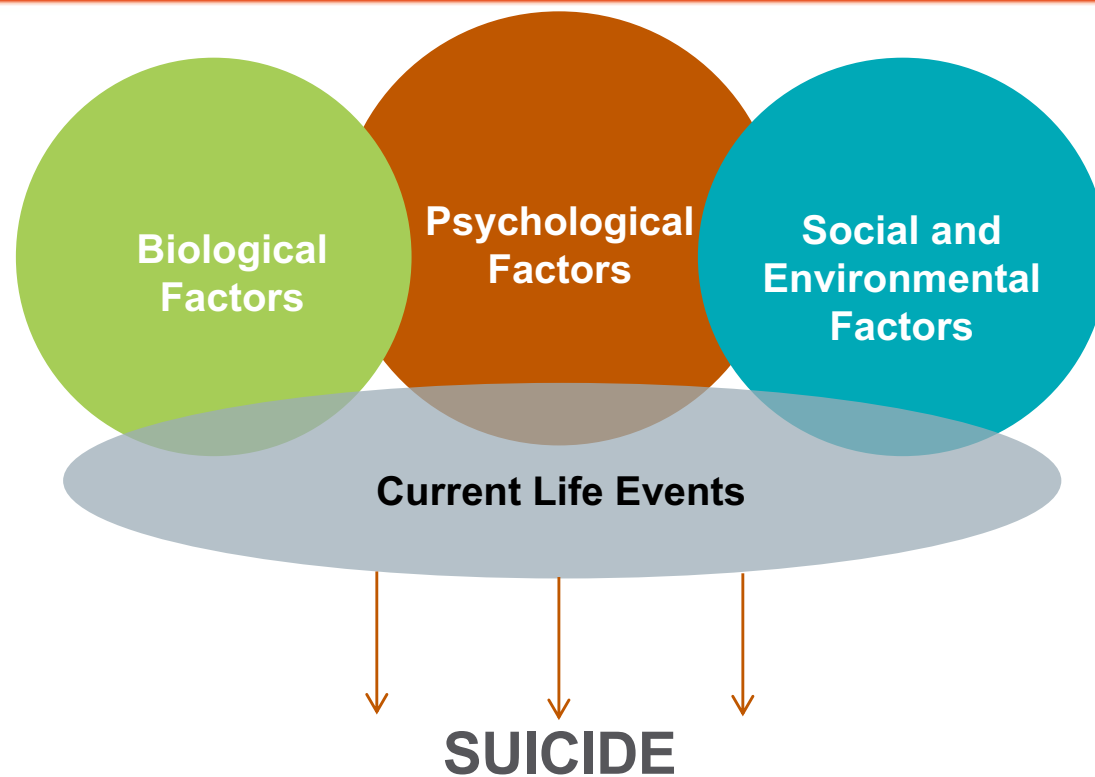
Crude Rates of Suicide by Calendar Year Among Veterans (V) and Civilians (C) Ages 18-29

2001-2014



Main Finding: Rates of suicide have increased substantially among younger Veterans while remaining relatively stable among civilians ages 18–29.

Interacting Risk and Protective Factors

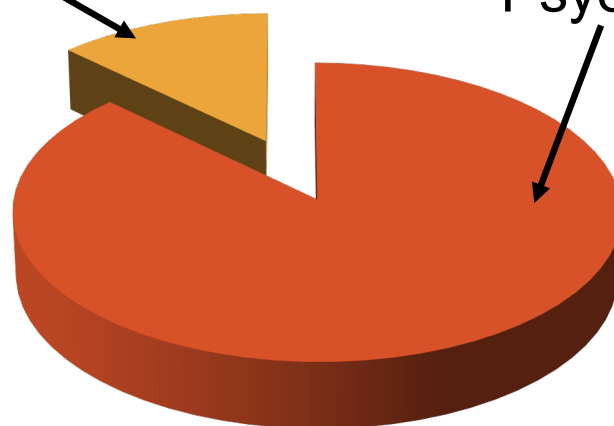


Suicide Deaths and Major Psychiatric Syndromes



< 10% without
Major Psychiatric
Syndromes

> 90% with Major
Psychiatric Syndromes



A number of psychological autopsy studies have found that approximately 90% of all completed suicides could be retrospectively diagnosed with a major mental disorder

Risk Factors for Suicide



- Mental health conditions
- Previous suicide attempt
- Serious physical illness/chronic pain
- Specific symptoms
- Family history of mental illness and suicide
- Childhood trauma

Protective Factors



- Strong support
- Connectedness
- Strong therapeutic alliance
- Accessing mental health care

JAMA Psychiatry | **Original Investigation**

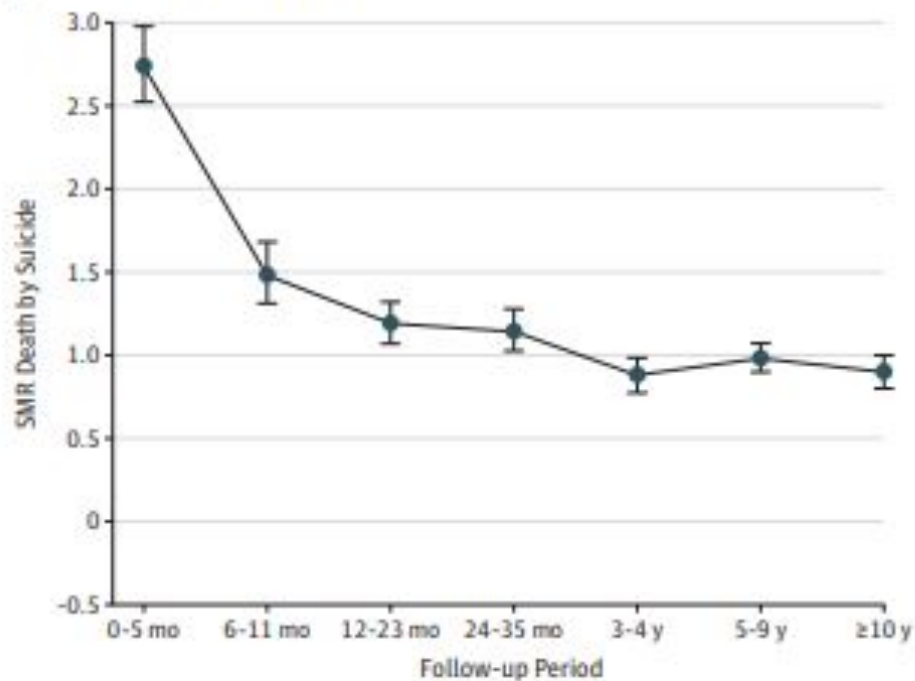
Risk of Suicide After Cancer Diagnosis in England

Katherine E. Henson, MSc, DPhil; Rachael Brock, MB, BChir; James Charnock, MSc;
Bethany Wickramasinghe, BSc; Olivia Will, MBChB, PhD, FRCS;
Alexandra Pitman, MSc(Econ), MBBS, MRCPsych, PhD

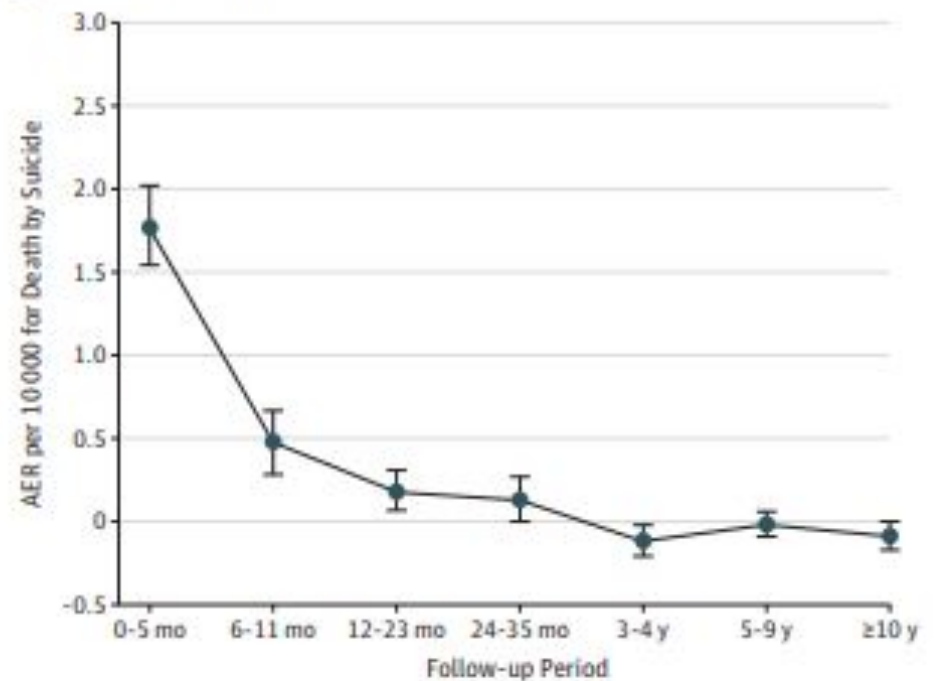
JAMA Psychiatry. 2019;76(1):51-60. doi:10.1001/jamapsychiatry.2018.3181
Published online November 21, 2018.

Figure. Suicide Standardized Mortality Ratios (SMRs) and Absolute Excess Risks (AERs) per 10 000 Person-Years at Risk by Follow-up Period

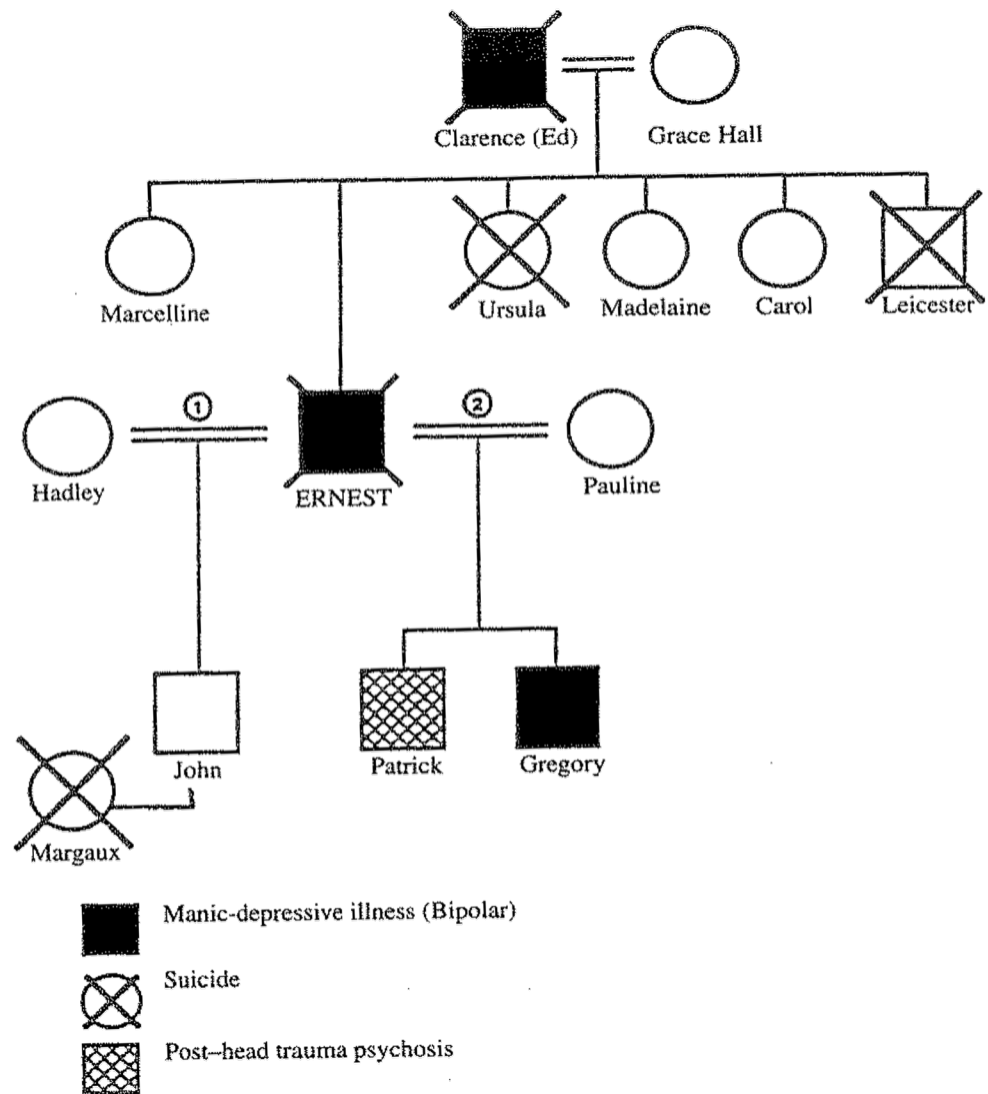
A Standardized mortality ratios



B Absolute excess risks



Estimates of SMRs (A) and AERs (B) are presented in eTable 5 in the Supplement. Error bars indicate 95% CIs.



Adapted from Jamison KR. 1993.

JAMA Psychiatry | [Original Investigation](#)

Positron Emission Tomographic Imaging of the Serotonergic System and Prediction of Risk and Lethality of Future Suicidal Behavior

Maria A. Oquendo, MD; Hanga Galfalvy, PhD; Gregory M. Sullivan, MD; Jeffrey M. Miller, MD; Matthew M. Milak, MD; M. Elizabeth Sublette, MD, PhD; Sebastian Cisneros-Trujillo, MD; Ainsley K. Burke, PhD; Ramin V. Parsey, MD, PhD; J. John Mann, MD

JAMA Psychiatry. 2016;73(10):1048-1055. doi:10.1001/jamapsychiatry.2016.1478

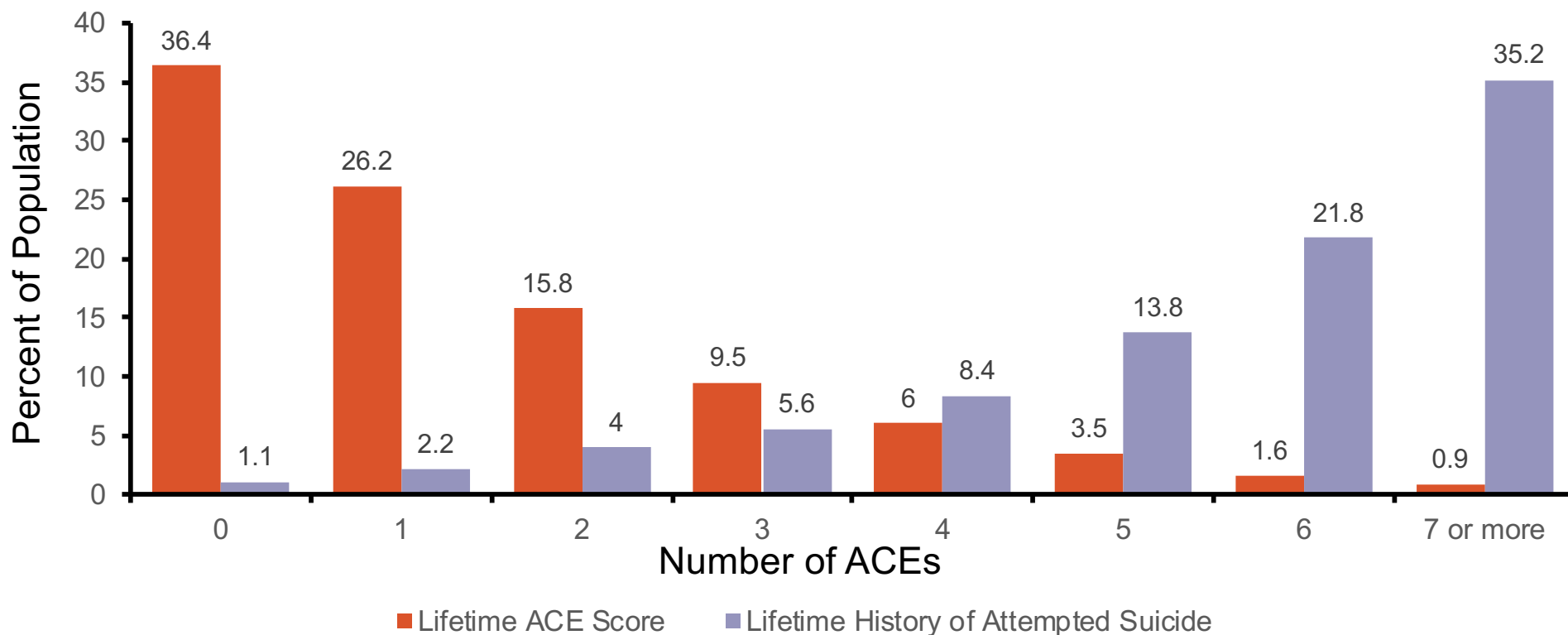
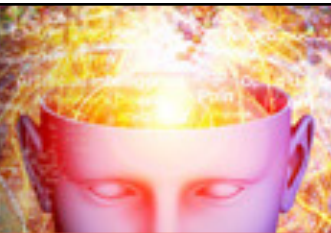
Published online July 27, 2016. Corrected on August 24, 2016.

Oquendo M, et al. *JAMA Psychiatry*. 2016.73;1048-1055.

Childhood Abuse, Household Dysfunction, and the Risk of Attempted Suicide Throughout the Life Span: Findings From the Adverse Childhood Experiences Study

**Shanta R. Dube, MPH; Robert F. Anda, MD, MS;
Vincent J. Felitti, MD; Daniel P. Chapman, PhD;
David F. Williamson, PhD; Wayne H. Giles, MD, MS**

Prevalence of multiple childhood adverse experiences (ACEs) and association between number of ACEs and lifetime history of attempted suicide (n = 17,337)



Adapted from: Dube SR et al. *JAMA*. 2001;286:3089-3096.

The role of inflammatory cytokines in suicidal behavior: A systematic review

Gianluca Serafini^{a,*}, Maurizio Pompili^a, Maria Elena Seretti^a,
Henry Stefani^a, Mario Palermo^a, William Coryell^b, Paolo Girardi^a

^a*Department of Neurosciences, Mental Health and Sensory Organs—Suicide Prevention Center, Sapienza University of Rome, Sant'Andrea Hospital, 1035-1039 Via di Grottarossa, Rome 00189, Italy*

^b*Department of Psychiatry, University of Iowa, Carver College of Medicine, 500 N Road, Iowa City, IA 52231-1190, United States*

European Neuropsychopharmacology (2013) 23, 1672-1686

Timing Matters



- Intense suicidal urge is short
- Transitions in life are higher risk times
- Ambivalence is at play: mixture of desire to live versus to die/escape pain

Means Matter



- Limiting access to lethal means saves lives and drives down rates for entire regions
 - Coal gas (UK)
 - Bridge barriers
 - Pesticides (Asia)
 - Medication blister pkg
 - Firearms policy changes (Israel)



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SMART Goals

Specific, Measurable, Attainable, Relevant, Timely



- Individual and social/cultural factors can create risk for or protection against suicide.
- Evaluate your patients for
 - Biological factors
 - Psychological factors
 - Social/environmental factors
- Talk with patients about protective factors when developing treatment plans
 - Connectedness
 - Therapeutic alliance
 - Access to mental health care/team

Questions & Answers

Don't forget to fill out your evaluations to collect your credit.

